

Appendix A

Emission Estimates
And
Major Modification Analysis

Emission Factors - Continued

Pollutant	CAS No.	Emission Factor (lb/MMBtu) ^a
Formaldehyde	50-00-0	7.0E-02
Hexane	110-54-3	1.8E+00
Indeno(1,2,3-cd)pyrene	183-39-6	1.8E-06
Naphthalene	91-20-3	6.1E-04
Perthane	108-66-0	2.6E+00
Phenanthrene	85-01-6	1.7E-05
Propane	74-98-6	1.6E+00
Pyrene	123-00-0	5.0E-06
Toluene	108-88-3	3.4E-03
Arsenic	7440-38-2	2.0E-04
Barium	7440-39-3	4.4E-03
Beryllium	7440-41-7	1.2E-05
Cadmium	7440-43-8	1.1E-03
Chromium	7440-47-3	1.4E-03
Cobalt	7440-48-4	8.4E-05
Copper	7440-50-8	8.5E-04
Manganese	7439-96-6	3.8E-04
Mercury	7439-97-8	2.6E-04
Molybdenum	7439-98-7	1.1E-03
Nickel	7440-02-0	2.1E-03
Selenium	7782-49-2	2.4E-05
Vandium	7440-02-2	2.3E-03
Zinc	7440-66-8	2.9E-02

All factors from AP-42 Natural Gas External Combustion, Section 1.4, July 1998
Heater 1 is equipped with Low NOx burners, Heater 2 is not, per 6-30-05 email from M. Johnson

Annual Emissions

Pollutant	2002 Annual Emissions (pounds/year)	2003 Annual Emissions (pounds/year)	2004 Annual Emissions (pounds/year)	Projected Annual Emissions (pounds/year)
Lead	0.12	0.11	0.12	0.17
N ₂ O	340.91	321.54	349.36	493.42
Methane	528.88	508.06	561.52	776.50
2-Methylnaphthalene	5.5E-03	6.3E-03	6.9E-03	8.1E-03
3-Methylchloranthrene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
7,12-Dimethylbenz(a)anthracene	3.7E-03	3.8E-03	3.8E-03	5.4E-03
Acenaphthene	4.1E-04	4.1E-04	4.4E-04	6.1E-04
Acenaphthylene	4.1E-04	4.0E-04	4.4E-04	6.1E-04

Annual Emissions - Continued

Pollutant	2002 Annual Emissions (pounds/year)	2003 Annual Emissions (pounds/year)	2004 Annual Emissions (pounds/year)	Projected Annual Emissions (pounds/year)
Anthracene	5.5E-04	5.3E-04	5.9E-04	8.1E-04
Benzo(a)anthracene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Benzene	4.9E-01	4.0E-01	5.1E-01	7.1E-01
Benzo(b)pyrene	2.8E-04	2.8E-04	2.9E-04	4.1E-04
Benzo(k)fluoranthene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Benzo(g,h,i)perylene	2.8E-04	2.8E-04	2.9E-04	4.1E-04
Benzo(k)fluoranthene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Butane	453.60	462.05	512.66	708.36
Chrysene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Dibenz(a,h)anthracene	2.8E-04	2.8E-04	2.9E-04	4.1E-04
Dichlorobenzene	2.8E-01	2.8E-01	2.9E-01	4.1E-01
Ethene	714.18	882.06	756.83	1043.59
Fluorene	6.9E-04	6.6E-04	7.3E-04	1.0E-03
Fluorine	6.9E-04	6.2E-04	6.8E-04	9.5E-04
Formaldehyde	17.28	18.50	18.31	25.32
Hexane	414.60	396.05	439.45	607.70
Indeno(1,2,3-cd)pyrene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Naphthalene	1.4E-01	1.3E-01	1.5E-01	2.1E-01
Pentane	699.69	572.07	634.78	877.79
Phenanthrene	3.9E-03	3.7E-03	4.2E-03	5.7E-03
Propane	368.61	352.04	390.62	540.18
Pyrene	1.2E-03	1.1E-03	1.2E-03	1.7E-03
Toluene	0.76	0.76	0.83	1.15
Arsenic	4.6E-02	4.4E-02	4.6E-02	6.9E-02
Barium	1.01	0.87	1.07	1.49
Beryllium	2.8E-03	2.6E-03	2.8E-03	4.1E-03
Cadmium	2.5E-01	2.4E-01	2.7E-01	3.7E-01
Chromium	3.2E-01	3.1E-01	3.4E-01	4.7E-01
Cobalt	1.8E-02	1.8E-02	2.1E-02	2.8E-02
Copper	2.0E-01	1.9E-01	2.1E-01	2.9E-01
Manganese	8.8E-02	8.4E-02	9.3E-02	1.3E-01
Mercury	6.0E-02	5.7E-02	6.3E-02	8.8E-02
Molybdenum	2.5E-01	2.4E-01	2.7E-01	3.7E-01
Nickel	4.6E-01	4.6E-01	5.1E-01	7.1E-01
Selenium	5.5E-03	5.3E-03	5.9E-03	8.1E-03
Vanadium	5.3E-01	5.1E-01	5.6E-01	7.8E-01
Zinc	6.66	6.36	7.08	9.79

Emission Increase		Projected Emission Increase (pounds/year)	Projected Emission Increase (pounds/hr)	EL (pounds/hr)	Above EL?
Pollutant					
Lead		0.05	6.32E-06	-	N/A
N ₂ O		127.96	1.48E-02	-	N/A
Methane		242.71	2.77E-02	-	N/A
2-Methylnaphthalene		2.9E-03	2.89E-07	-	N/A
3-Methylfluoranthene		1.9E-04	2.17E-08	2.9E-06	No
7,12-Dimethylbenz(a)anthracene		1.7E-03	1.93E-07	-	N/A
Acenaphthylene		1.9E-04	2.17E-08	-	N/A
Acenaphthylene		1.9E-04	2.17E-08	-	N/A
Anthracene		2.9E-04	2.89E-08	-	N/A
Benzo(a)fluoranthene		1.9E-04	2.17E-08	-	N/A
Benzo(a)pyrene		2.2E-01	2.53E-05	8.0E-04	No
Benzo(b)fluoranthene		1.9E-04	1.45E-08	2.0E-06	No
Benzo(g,h,i)perylene		1.9E-04	2.17E-08	-	N/A
Benzo(k)fluoranthene		1.9E-04	1.45E-08	-	N/A
Butane		221.81	2.17E-06	-	N/A
Chrysene		1.9E-04	2.53E-02	-	N/A
Dibenz(a,h)anthracene		1.9E-04	2.17E-08	-	N/A
Dichlorobenzene		1.9E-01	1.45E-06	-	N/A
Ethane		327.14	3.73E-02	-	N/A
Fluoranthene		3.2E-04	3.61E-08	-	N/A
Fluorene		3.0E-04	3.37E-08	-	N/A
Formaldehyde		7.91	9.03E-04	5.1E-04	Yes
Heptane		188.95	2.17E-02	12	No
Indeno(1,2,3-cd)pyrene		1.9E-04	2.17E-08	-	N/A
Naphthalene		8.4E-02	7.35E-06	3.33	No
Perthane		274.37	3.13E-02	118	No
Phenanthrene		1.9E-03	2.05E-07	-	N/A
Propane		168.84	1.93E-02	-	N/A
Pyrene		5.3E-04	8.02E-08	-	N/A
Toluene		3.8E-01	4.10E-05	25	No
Arsenic		2.1E-02	2.41E-06	1.5E-06	Yes
Barium		0.48	5.30E-05	3.3E-02	No
Beryllium		1.3E-03	1.45E-07	2.8E-06	No
Cadmium		1.2E-01	1.33E-05	3.7E-06	Yes
Chromium		1.9E-01	1.69E-06	5.6E-07	Yes
Cobalt		8.9E-03	1.01E-06	3.3E-03	No
Copper		9.0E-02	1.02E-06	6.7E-02	No

<i>Emission Increase - Continued</i>				
Pollutant	Projected Emission Increase (pounds/year)	Projected Emission Increase (pounds/hr)	EL (pounds/hr)	Above EL?
Manganese	4.0E-02	4.88E-06	6.7E-02	No
Mercury	2.7E-02	3.15E-06	3.0E-03	No
Molybdenum	1.2E-01	1.33E-05	3.3E-01	No
Nickel	2.2E-01	2.53E-05	2.7E-05	No
Selenium	2.6E-03	2.88E-07	1.3E-02	No
Vanadium	2.4E-01	2.77E-05	3.0E-03	No
Zinc	3.08	3.40E-04	6.7E-01	No

SPA Production

<i>Operations</i>			
2002 P2O5 Input (tons/year)	2003 P2O5 Input (tons/year)	2004 P2O5 Input (tons/year)	Projected P2O5 Input (tons/year)
170,557.3	182,536.6	188,035.4	345,000
186,085.0 2003-2004 Average P2O5 production, tons/year			

Fluoride Emission Factors

0.0044	lb Fluoride / ton P2O5 feed, 2004 source test
0.004	lb Fluoride / ton P2O5 feed, 2003 source test
0.0024	lb Fluoride / ton P2O5 feed, 2002 source test
0.0087	lb Fluoride / ton P2O5 feed, Future PTE

Particulate Emission Factors

0.0124	lb PM / ton P2O5 feed, 2004 source test
0.0124	lb PM / ton P2O5 feed, 2003 source test
0.0124	lb PM / ton P2O5 feed, 2002 source test
0.0124	lb PM / ton P2O5 feed, Projected

Annual Emissions

Pollutant	2002 Annual Emissions (tons/year)	2003 Annual Emissions (tons/year)	2004 Annual Emissions (tons/year)	Projected Annual Emissions (tons/year)
PM	1.06	1.13	1.18	2.14
PM-10	1.06	1.13	1.18	2.14
Fluoride	0.20	0.37	0.42	1.50



Agrium Conda Phosphate Operations*
3010 Conda Road
Soda Springs, ID 83276
Tel: 208-547-4381
Fax: 208-547-2550

October 18, 2005

EN-05-119

CERTIFIED MAIL # 7002 2030 0006 3195 6976

Air Quality Permit Compliance
Department of Environmental Quality
1410 North Hilton
Boise, ID 83706-1255
Attn: Ken Hanna

RECEIVED

OCT 21 2005

DEPARTMENT OF ENVIRONMENTAL QUALITY
BOISE, IDAHO

RE: SPA: Additional Information Report

Dear Mr. Hanna,

Attached is our response for the additional information request concerning our (PTC) SPA process line throughput increase: The SPA production increase based on our internal and external consultant (Geomatrix) review considered higher firing rates in our B-5 Boiler and concluded that emission increases would not exceed the Significant Emission Rates that trigger PSD. We request that the allowable fuel consumption limit in PTC No. 029-00003 and the Tier 1 permit be updated to reflect the boiler name plate capacity of 1,873 MMscf/year.

The additional information you requested is in the attachment 1 dated October 13, 2005 memo to James Cagle. We believe all the attachment 1 information formed after reasonable inquiry, that statements and information are true, accurate, and complete."

If you have questions concerning this report, please contact James Cagle, Risk Manager, at (208) 547-4381 extension 213.

Sincerely,

Charles H. Ross
General Manager

Attachment: (1) Response EN-05-119

CHR/jc

* A Registered Name of Nu-West Industries, Inc.



ATTACHMENT
1 - EN-05-119

October 13, 2005

Mr. James Cagle
Agrium U.S. Inc.
Conda Phosphate Operations
3010 Conda Road
Soda Springs, Idaho 83276

Re: IDEQ Data Request Response
Agrium Superphosphoric Acid Production Limit

Dear Mr. Cagle:

On June 20, 2005, Agrium Conda Phosphate Operations (CPO) submitted a PSD applicability analysis to the Department of Environmental Quality for a proposed increase in CPO's superphosphoric acid (SPA) production limit. This letter provides information responding to Ken Hanna's subsequent information request, dated September 12, 2005. The responses to his requests are listed below the corresponding request.

Request #1

The projected heat input for Boiler B-5 listed on pg 4 of the July 1, 2005 PSD analysis refers to 1,872,888 MMscf/yr but Tier I Permit Condition 5.6 limits this to 1,768 MMscf/yr and the projected actual emissions rates appear to fall within the permitted fuel limit. This doesn't appear to be any problem, but please let us know if the emission limits and allowable fuel consumption limit in PTC No. 029-00003, issued 7/7/95, for Boiler B5 should also be revised as part of this project. Additional Fees may apply.

Response #1

The 213.8 MMBtu/hr rating for Boiler B-5 corresponds to a maximum annual fuel input of 1873 MMscf (assuming 1000 Btu/scf). Our calculations of emission increases resulting from the proposed SPA production increase considered this higher firing rate and concluded that emission increases would not exceed the Significant Emission Rates that trigger PSD. Therefore, Agrium should request that the allowable fuel consumption limit in PTC No. 029-00003 and the Tier I permit be updated to reflect the boiler name plate capacity of 1,873 MMscf/year.

Request #2

Additional details are needed to demonstrate compliance with the TAP requirements under IDAPA 58.01.01.210 for the project's emissions increase, as follows:

- *A TAP emissions inventory for the Thermal Oil Heaters.*

19203 16th Avenue West, Suite 101 Tel 425.921.4000
Lynnwood, Washington 98036-5772 Fax 425.921.4040

www.geomatrix.com



Mr. James Cagle
Agrium U.S. Inc.
October 13, 2005
Page 2

- *For those TAPs that do not exceed the EL, state that IDAPA 58.01.01.210.05 is met for those TAPs.*
- *Identify each TAP that exceeds the EL.*
- *For each TAP that exceeds the EL, show how IDAPA 58.01.01.210. 06, 07, or 08 is met.*

Response #2

Geomatrix prepared a detailed emission inventory for the increase in toxic air pollutants (TAPs) emitted from proposed increased utilization of the two hot oil heaters. The emission increase of each TAP was compared to its respective screening emission level (EL) to determine if any further analysis is necessary. We determined that only four pollutants (formaldehyde, arsenic, cadmium, and chromium) would have an increase in emissions exceeding their EL. Consequently, the requirements contained within IDAPA 58.01.01.210.05 are met for all TAPs except for the four listed TAPs. This detailed inventory is presented in Attachment 1.

Geomatrix used the conservative dispersion model SCREEN3 to conduct an ambient air quality analysis of the four TAPS that exceeded their ELs. Since the hot oil heaters have identical stack parameters and are located very close to each other, one stack was used in the SCREEN3 model to represent both stacks. Emissions from both hot oil heaters were assumed to be emitted from this representative stack. This is a conservative assumption. SCREEN3 was run using the following inputs:

Rural conditions: Geomatrix used the default options for rural conditions. Within three kilometers of the facility, a large portion of the land is undeveloped or rural. Geomatrix estimated the population density surrounding the facility using the Auer Land Use method, and found that greater than 50% of the land within three kilometers of the facility is undeveloped. Therefore, the rural dispersion option was chosen.

Ambient air boundary: A plot plan of the facility is included within Attachment 2 which displays the site boundary and reflects property of the Agrium Facility. This boundary is considered the ambient air boundary. The shortest distance between the boundary and the hot oil heater stacks is approximately 1500 feet (457 meters).

Meteorological data: Geomatrix utilized the full meteorology option available within SCREEN3. Under this option, SCREEN3 examines a range of stability classes and wind speeds to identify the worst-case meteorological condition out of the 54 possible combinations.

Emissions: Since the maximum ambient air concentration calculated within the SCREEN3 dispersion model is linearly related to the emission rate, a unit emission rate of 1 gram per second was evaluated with the model. The resulting maximum ambient air concentration was then multiplied by each pollutant emission rate to calculate each pollutant's maximum concentration.



Mr. James Cagle
Agrium U.S. Inc.
October 13, 2005
Page 3

Ground level concentrations are heavily influenced by release characteristics including stack parameters. Geomatrix used the stack parameters shown in Table 1 in our modeling analysis.

TABLE 1
STACK PARAMETERS
Agrium Conda Operations
Soda Springs, Idaho

HEIGHT METERS (FT)	TEMPERATURE K (°F)	FLOW RATE ACFM	DIAMETER METERS (INCHES)
6.7 (22.0)	561 (550)	9,425	0.76 (30)

Results: The maximum one-hour average ambient concentration for an emission rate of 1 gram per second was determined to be 41.68 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$). This one-hour average concentration was then converted into an annual average using the persistence factor of 0.125 in order to compare model results to the applicable ambient concentration for carcinogens (AACC) standards. Table 2 details the pollutant specific modeled concentrations along with the applicable standard for each pollutant.

TABLE 2
SCREEN3 DISPERSION MODELING ANALYSIS RESULTS
Agrium Conda Operations
Soda Springs, Idaho

Pollutant	Emission Rate lb/hr	EL lb/hr	Emission Rate g/s	Max off-site concentration $\mu\text{g}/\text{m}^3$	AACC Standard $\mu\text{g}/\text{m}^3$	Below AACC?
Formaldehyde	9.03E-04	5.1E-04	1.14 E-04	5.93 E-04	7.7 E-02	Yes
Arsenic	2.41E-06	1.5E-06	3.04 E-07	1.58 E-06	2.3 E-04	Yes
Cadmium	1.33E-05	3.7E-06	1.68 E-06	8.73 E-06	5.6 E-04	Yes
Chromium	1.69E-05	5.6E-07	2.13 E-06	1.11 E-05	8.3 E-05	Yes

SCREEN3 was also utilized to model the complex terrain located to the east of the facility. None of the elevated terrain modeled concentrations are above the maximum off-site concentration modeled presented in Table 2.

This modeling analysis indicates that the increased utilization of the hot oil heaters at the Agrium Conda Operations will not exceed any AACC. Thus, the production increase would comply with IDAPA 58.01.01.210.06. SCREEN3 output files are provided as Attachment 2.



Mr. James Cagle
Agrium U.S. Inc.
October 13, 2005
Page 4

Request #3

The analysis under 52.21(a)(2)(iv) needs to include all emission units included in this "project"; in particular, the fugitive emissions sources associated with the Phosphoric Acid Plant should be added to the "PSD Applicability Analysis for the SPA Process Line Throughput Increase, July 1, 2005" (i.e., Gyp Stack, Ore Unloading and Storage, Fugitive Road Dust, and Ore Plies). See 52.219b)(41)(ii)(b) and 52.21(b)(48)(ii)(a).

Response #3

Fugitive emissions associated with the Phosphoric Acid Plant have been incorporated into the PSD applicability analysis. The sources of associated fugitive emissions added in this update include 1) the unloading, transfer and storage of ore, and 2) gyp stack activities, including emissions of fugitive road dust. The updated PSD applicability analysis still shows that the proposed modifications to the Agrium CPO do not exceed any PSD significant emission rates. The updated analysis is included as Attachment 3 to this response letter.

Request #4

The PTC processing fee will probably need to be revised. Right now it looks like this fee would be \$2,500.00 for a modification with an increase of 1-10 TPY (see IDAPA 58.01.01.225).

Response #4

We understand Agrium will coordinate with IDEQ regarding additional fees.

If you have any questions regarding information in this letter, or if you need any additional information, please do not hesitate to contact me or Rafe Christopherson at 425.921.4000.

Sincerely,
Geomatrix Consultants, Inc.


Eric Hansen
Senior Consultant

Attachments: Attachment 1: Heater TAP Analysis
Attachment 2: Heater TAP Modeling Output Files
Attachment 3: Updated PSD Applicability Analysis

cc: Rafe Christopherson, Geomatrix Consultants

Attachment 1
Heater TAP Analysis

Thermal Oil Heaters - TAP Emissions Analysis

Heater 1 Operations

2002 Fuel Input (MMBtu/Year)	2003 Fuel Input (MMBtu/Year)	2004 Fuel Input (MMBtu/Year)	Projected Fuel Input (MMBtu/Year)
108,388	104,180	120,541	179,554

Heater 2 Operations

2002 Fuel Input (MMBtu/Year)	2003 Fuel Input (MMBtu/Year)	2004 Fuel Input (MMBtu/Year)	Projected Fuel Input (MMBtu/Year)
124,018	116,845	123,799	158,558

Heater fuel use projections based on maximum heat input capacities identified in 6-30-05 fax from M. Johnson

Emission Factors

Pollutant	CAS No.	Emission Factor (lb/MMBtu) ¹
Lead		0.0005
N ₂ O (Heater 1 - low NO _x)		0.64
N ₂ O (Heater 2)		2.2
Methane		2.3
2-Methylnaphthalene	91-57-6	2.4E-05
3-Methylcaranthrene	58-49-5	1.8E-08
7,12-Dimethylbenz(a)anthracene		1.5E-05
Acenaphthene	83-32-9	1.8E-06
Acenaphthylene	213-95-8	1.8E-06
Anthracene	120-12-7	2.4E-06
Benzo(a)anthracene	56-55-3	1.8E-06
Benzo(a)pyrene	71-43-2	2.1E-05
Benzo(b)fluoranthene	50-32-8	1.2E-06
Benzo(k)fluoranthene	205-99-2	1.8E-06
Benzo(g,h,i)perylene	191-24-2	1.2E-06
Benzo(i)fluoranthene	205-82-3	1.8E-06
Butane	106-87-8	2.1E+00
Chrysene	218-01-9	1.8E-06
Dibenz(a,h)anthracene	53-70-3	1.2E-06
Dibenzofuran	25321-22-6	1.2E-03
Ethane	74-84-0	3.1E+00
Fluoranthene	206-44-0	3.0E-06
Fluorene	86-73-7	2.8E-06
Formaldehyde	50-00-0	7.5E-02
Hexane	110-54-3	1.8E+00
Indeno(1,2,3-cd)pyrene	193-39-5	1.8E-06
Naphthalene	91-20-3	8.1E-04
Perlene	109-66-0	2.8E+00
Phenanthrene	85-01-6	1.7E-05
Propene	74-88-6	1.6E+00
Pyrene	129-00-0	5.0E-06
Toluene	108-88-3	3.4E-03
Arsenic	7440-28-2	2.0E-04
Barium	7440-39-3	4.4E-03
Beryllium	7440-41-7	1.2E-05
Cadmium	7440-43-9	1.1E-03
Chromium	7440-47-3	1.4E-03
Cobalt	7440-48-4	8.4E-05
Copper	7440-50-8	8.5E-04
Manganese	7439-95-5	3.8E-04
Mercury	7439-97-6	2.6E-04
Molybdenum	7439-98-7	1.1E-03
Nickel	7440-02-0	2.1E-03
Selenium	7782-49-2	2.4E-06
Vandium	7440-62-2	2.3E-03
Zinc	7440-66-6	2.9E-02

All factors from AP-42 Natural Gas External Combustion, Section 1.4, July 1998

Annual Emissions				
Pollutant	2002 Annual Emissions (pounds/year)	2003 Annual Emissions (pounds/year)	2004 Annual Emissions (pounds/year)	Projected Annual Emissions (pounds/year)
Lead	0.12	0.11	0.12	0.17
N ₂ O	340.91	321.54	349.38	483.42
Methane	529.88	506.06	661.52	776.50
2-Methylnaphthalene	5.6E-03	5.3E-03	5.9E-03	8.1E-03
3-Methylchloranthrene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
7,12-Dimethylbenzo(a)anthracene	3.7E-03	3.5E-03	3.9E-03	5.4E-03
Acenaphthene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Acenaphthylene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Anthracene	5.5E-04	5.3E-04	5.9E-04	8.1E-04
Benzo(a)fluoranthene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Benzo(a)pyrene	4.8E-01	4.6E-01	5.1E-01	7.1E-01
Benzo(b)fluoranthene	2.8E-04	2.6E-04	2.9E-04	4.1E-04
Benzo(g,h,i)perylene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Benzo(k)fluoranthene	2.8E-04	2.6E-04	2.9E-04	4.1E-04
Butane	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Chrysene	483.90	462.05	512.69	706.98
Dibenz(a,h)anthracene	2.8E-04	2.6E-04	2.9E-04	4.1E-04
Dichlorodibenzene	2.8E-01	2.6E-01	2.9E-01	4.1E-01
Ethane	714.18	682.08	758.83	1048.58
Fluoranthene	6.9E-04	6.6E-04	7.3E-04	1.0E-03
Fluorene	6.5E-04	6.2E-04	6.9E-04	9.6E-04
Formaldehyde	17.28	16.50	18.31	25.32
Heptane	414.89	389.05	439.45	607.70
Indeno(1,2,3-cd)pyrene	4.1E-04	4.0E-04	4.4E-04	6.1E-04
Naphthalene	1.4E-01	1.3E-01	1.5E-01	2.1E-01
Perylene	599.99	572.07	634.78	877.78
Phenanthrene	3.9E-03	3.7E-03	4.2E-03	5.7E-03
Propane	368.81	352.04	380.82	540.18
Pyrene	1.2E-03	1.1E-03	1.2E-03	1.7E-03
Toluene	0.78	0.75	0.83	1.15
Unsat	4.8E-02	4.4E-02	4.9E-02	6.8E-02
Barium	1.01	0.97	1.07	1.49
Beryllium	2.8E-03	2.6E-03	2.9E-03	4.1E-03
Cadmium	2.5E-01	2.4E-01	2.7E-01	3.7E-01
Chromium	3.2E-01	3.1E-01	3.4E-01	4.7E-01
Cobalt	1.9E-02	1.8E-02	2.1E-02	2.8E-02
Copper	2.0E-01	1.9E-01	2.1E-01	2.9E-01
Manganese	8.8E-02	8.4E-02	9.3E-02	1.3E-01
Mercury	6.0E-02	5.7E-02	6.3E-02	8.8E-02
Molybdenum	2.5E-01	2.4E-01	2.7E-01	3.7E-01
Nickel	4.8E-01	4.6E-01	5.1E-01	7.1E-01
Selenium	5.9E-03	5.3E-03	5.9E-03	8.1E-03
Vandium	5.3E-01	5.1E-01	5.6E-01	7.8E-01
Zinc	6.88	6.38	7.08	9.79

Emission Increase

Pollutant	Projected Emission Increase (pounds/year)	Projected Emission Increase (pounds/hr)	EL (pounds/hr)	Above EL?
Lead	0.08	8.62E-06	-	N/A
H ₂ O	127.98	1.48E-02	-	N/A
Methane	242.71	2.77E-02	-	N/A
2-Methylnaphthalene	2.5E-03	2.89E-07	-	N/A
3-Methylchloranthrene	1.9E-04	2.17E-08	2.5E-08	No
7,12-Dimethylbenzo(a)anthracene	1.7E-03	1.93E-07	-	N/A
Acenaphthene	1.9E-04	2.17E-08	-	N/A
Acenaphthylene	1.9E-04	2.17E-08	-	N/A
Anthracene	2.5E-04	2.89E-08	-	N/A
Benzo(b)fluoranthene	1.9E-04	2.17E-08	-	N/A
Benzene	2.2E-01	2.53E-06	8.0E-04	No
Benzo(a)pyrene	1.3E-04	1.48E-08	2.0E-08	No
Benzo(b)fluoranthene	1.9E-04	2.17E-08	-	N/A
Benzo(p,h)perylene	1.3E-04	1.48E-08	-	N/A
Benzo(k)fluoranthene	1.9E-04	2.17E-08	-	N/A
Butane	221.81	2.53E-02	-	N/A
Chrysene	1.9E-04	2.17E-08	-	N/A
Dibenz(a,h)anthracene	1.3E-04	1.48E-08	-	N/A
Dichlorobenzene	1.3E-01	1.48E-05	-	N/A
Ethane	327.14	3.73E-02	-	N/A
Fluoranthene	3.3E-04	3.81E-08	-	N/A
Fluorene	3.0E-04	3.37E-08	-	N/A
Formaldehyde	7.91	8.03E-04	5.1E-04	Yes
Heptane	189.95	2.17E-02	12	No
Indeno(1,2,3-cd)pyrene	1.9E-04	2.17E-08	-	N/A
Naphthalene	6.4E-02	7.35E-08	3.33	No
Paraffins	274.37	3.13E-02	118	No
Phenanthrene	1.9E-03	2.05E-07	-	N/A
Propene	188.84	1.93E-02	-	N/A
Pyrene	5.3E-04	6.02E-08	-	N/A
Toluene	3.8E-01	4.10E-05	25	No
Arsenic	2.1E-02	2.41E-08	1.0E-08	Yes
Berkum	0.46	5.30E-05	3.3E-02	No
Beryllium	1.3E-03	1.48E-07	2.8E-05	No
Cadmium	1.2E-01	1.33E-05	3.7E-05	Yes
Chromium	1.3E-01	1.89E-08	5.8E-07	Yes
Cobalt	8.9E-03	1.01E-08	3.3E-03	No
Copper	9.0E-02	1.02E-05	8.7E-02	No
Manganese	4.0E-02	4.58E-08	8.7E-02	No
Mercury	2.7E-02	3.13E-06	3.0E-03	No
Molybdenum	1.2E-01	1.33E-05	3.3E-01	No
Nickel	2.2E-01	2.53E-05	2.7E-05	No
Selenium	2.5E-03	2.89E-07	1.3E-02	No
Vandium	2.4E-01	2.77E-03	3.0E-03	No
Zinc	3.08	3.48E-04	8.7E-01	No